

REQUEST FOR INFORMATION

SUBJECT: Gigabit Broadband Service Delivery and Expansion

INQUIRIES: All inquiries or questions must be directed to Mobin Khan, Director of Economic Development and Research, 314-335-2304, or fax 314-436-1646 or email mkhan@downtownstl.org

Questions must be received no later than Monday, May 16, 2016. If a determination is made that a clarification or change to the RFI document is required, a written addendum will be posted on the appropriate sections of the websites of the Issuers. Respondents are responsible for obtaining all RFI updates.

Responses must be delivered at the following address no later than 12:00 Noon CST on June 20, 2016.

Mobin Khan
Director, Economic Development and Research
Downtown STL, Inc.
720 Olive Street, Suite 450
St. Louis, MO 63101

Submit one (1) hard copy and one (1) electronic copy (via email to mkhan@downtownstl.org) of your response including any product literature or data. Submittals shall be labeled: "RFI for Gigabit Broadband Service Delivery and Expansion."

Responding to this RFI is not a pre-requisite for responding to any subsequent solicitations which may be issued relating to this project.

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I. EXECUTIVE SUMMARY

Downtown STL, Inc., City of St. Louis, St. Louis Development Corporation, and St. Louis Economic Development Partnership referred hereinafter jointly as the "Issuers", issue this Request For Interest ("RFI") to gather ideas and interest from service providers for developing, upgrading, and expanding gigabit broadband infrastructure and improving access to high-speed Internet for residents and businesses across St. Louis City.

This RFI is intended to outline the market opportunity and invite interested "vendors" to submit their ideas for service delivery in St. Louis. This process is one of many steps that the issuers are taking to help develop a digital network infrastructure that addresses the current and future connectivity needs of established businesses, startups, and residents throughout St. Louis City.

A key area of emphasis for this RFI is St. Louis's innovation clusters e.g.: Downtown St. Louis, Cortex, Cherokee, Mid-town alley etc.. These clusters have many of the critical gigabit infrastructure components already in place along with high density of innovation industry users, and their sustained growth is essential for economic growth of St. Louis in 21st century.

ISSUERS seek ideas and interest from respondents the following four goals:

<u>Goal 1:</u> Create a gigabit service capable network and delivery system in targeted innovation clusters and high-demand residential zones to support idea generation, job creation, and stimulate economic development.

<u>Goal 2:</u> Deliver gigabit internet service at prices comparable to other gigabit fiber communities across the nation.

Goal 3: Offer gigabit internet service covering the entire St. Louis city.

<u>Goal 4:</u> Deliver internet service (at least 100 MB/20 MB) over a wired or wireless network to disadvantaged residential areas across St. Louis as identified by the Issuers.

Issuers welcome responses to this RFI from ALL interested or potentially interested parties. Respondents can address any of the four above-mentioned goals in their submittals and are not required to addresses all four goals. Since this is **only** to solicit preliminary interest and ideas, this RFI **should not** be construed as an invitation for bids or request for proposals for any work related to gigabit services that may or may not be awarded as a result of this RFI. For the purposes of this RFI, the terms "respondent", "service provider", "vendor" mean entity(ies) submitting a written response to this RFI.

II. RFI TIMELINE

A. Important Dates

The estimated schedule for the RFI process is as follows:

RFI Release 04/12/2016

Deadline for questions 05/16/2016

Responses Due by 12:00 Noon CST on 06/20/2016

Any changes in the process or updates to the schedule above will be posted on the websites of Issuers.

B. Contact for questions and information requests

All general communications regarding the RFI or requests for additional information should be directed to:

Mobin Khan
Director, Economic Development and Research
Downtown STL, Inc.
720 Olive Street, Suite 450
St. Louis, MO 63101
314-335-2304
mkhan@downtownstl.org

C. Further Process

Downtown STL, Inc., City of St. Louis, St. Louis Development Corporation, and St. Louis Economic Development Partnership the joint issuers ("Issuers") of this RFI, anticipate that based on the information gathered through this RFI process, it may proceed to a Request for Proposals that will result in binding commitments between ISSUERS, Service Provider(s), and potentially other entities related to the upgrading and expanding broadband infrastructure and Gigabit internet service availability in St. Louis as described in this RFI.

III. OBJECTIVES OF RFI

St. Louis region has been the home of innovators and pioneers since its founding and the enterprising spirit of businesses and residents has been the driving force of this city. Key infrastructure assets of our region, such as ports on the Missouri River, have been significant catalysts for growth and development.

In 21st century, St. Louis region continues to be a destination for pioneers and innovators. Many of the national publications have consistently identified St. Louis as the one of the top startup cities in the United States.¹ One of the key infrastructure ingredients for sustaining and accelerating the growth of this innovation ecosystem is availability of modern fiber-optic network and access to affordable and ultra-fast broadband internet for businesses and residents alike.

The Issuers of this RFI recognize the significance of this ultrafast broadband for the success of its residents and businesses, and are committed to making the critical investments and policy modifications required to ensure that St. Louis has widely available and affordable ultra-high-speed internet service.

For the sustained economic growth and success of St. Louis region, the issuers in collaboration with its partners and stakeholders, continue to work on creating a necessary infrastructure base as well as a competitive market environment that provides resources necessary for success of our people and businesses alike. And access to a high-speed broadband network has become one of the most important factors for success in a modern information based economy.

The vision governing this RFI is to have a widely offered, easily accessible, affordable, highly reliable and fast broadband internet available for everyone. This vision is reflected in the following four goals.

<u>Goal 1:</u> Create a gigabit service capable network and delivery system in targeted innovation clusters and high-demand residential zones to support idea generation, and job creation, and stimulate economic development.

A first step toward achieving affordable high-speed internet access could include building upon existing Issuer-owned fiber to focus on providing immediate access to households and businesses in locations near this fiber. In addition, this access should be provided in selected areas where there is a demonstrated demand and where construction is a cost-effective adjunct to construction related to the targeted commercial and industrial areas. Key to this effort will be leveraging existing fiber assets, deploying new fiber where necessary, and connecting this backbone to serve new and existing residences and businesses in target locations.

¹ Numerous national publications have recognized St. Louis as one of the best emerging ecosystems of innovation and entrepreneurship. Popular Mechanics ranked St. Louis as #1 emerging startup city in the United States. Datafox ranked St. Louis #9 on its list of best cities to create a startup.

Issuers' primary goal is to increase penetration of affordable broadband service to foster innovation, drive job creation, and stimulate economic growth. To help Issuers achieve these goals, respondents should include in their submittals ideas and recommendations for accomplishing the following objective:

- Increase competition to improve cost-effective internet access for residents (e.g., remote workers, home-based enterprises) and businesses that need, or will need, faster connectivity.
 - i. Provide a reliable platform for innovative companies and individuals that require high-speed broadband to conduct business.
 - ii. Enhance educational opportunities at universities and health care delivery services.
 - iii. Stimulate new product, application, and service development through increased bandwidth and network capacity.
 - iv. Allow businesses to focus on growing their business, not the lack of access to needed telecommunications infrastructure.

<u>Goal 2:</u> Deliver gigabit internet service at prices comparable to other gigabit fiber communities across the nation.

To help Issuers achieve this goal, respondents are invited to submit ideas and recommendations on approaches for providing this level of bandwidth at prices consistent with prices charged in gigabit communities across the nation.

Goal 3: Offer gigabit internet service covering the entire St. Louis City.

This RFI seeks ideas regarding the building of network and the provision of services that would eventually cover the St. Louis City in its entirety. The respondents are not required to submit ideas and interest to cover this above-mentioned area independently. The RFI is open to a phased approach where network buildout and service delivery may start in innovation clusters but may be expanded to other areas as and when feasible.

<u>Goal 4:</u> Provide free or heavily-discounted gigabit internet service over a wired or wireless network to underserved and disadvantaged residential areas across St. Louis.

In addition to providing cutting-edge broadband service for commercial sectors, as well as residential areas with demonstrated demand, widespread access to reliable, affordable high-speed internet service is critical to ensuring that all St. Louis residents are connected to the modern economy. Low-income and disadvantaged residents are often underserved by the city's current broadband infrastructure and a lack of universally-available, affordable broadband service. Overcoming geographic or financial barriers to connect all St. Louis residents to the educational, cultural, and economic opportunities and resources they deserve is essential to empower city residents to be at the forefront in an increasingly borderless, digital world. Existing programs in the city that provide very low

cost connectivity options for qualifying households may offer a potential model for how to roll this out at scale.

To help Issuers achieve this goal, respondents are invited to submit ideas and recommendations on approaches to providing free or heavily discounted 100 MB (minimum) internet service over a wired or wireless network to underserved or disadvantaged residential areas.

IV. REQUESTED INFORMATION

The RFI invites all interested parties to submit ideas and information that can help achieve any or all of the goals outlined in the previous section. RFI specifically seeks suggestions on business models that may have best potential for success in St. Louis, and what policies and process modifications and/or additions maybe helpful towards those goals.

A. GENERAL GUIDELINES

Strategies included in responses to the RFI should aim for forward-looking, assertive technology solutions that create immediate advantages for users and fertile platforms for innovations in products and services that sustain our technology leadership for years to come.

- High upstream bandwidth, preferably a symmetric connection, is considered essential.
- Some or all of a respondent's proposed service offerings could initially be at speeds below the thresholds so long as the overall strategy furthers the goals of broadband innovation and development.
- While Issuers share a belief that ultra-high-speed broadband networks are a prerequisite for ongoing advances in a number of disciplines, end-users in our city have a wide-range of networking needs and use-cases. We do not anticipate that all areas in St. Louis would receive access to similar speeds at similar times.
- Respondents should feel free to propose alternative business models and network solutions that could be used to meet Issuers needs.

B. SCOPE OF REQUESTED INFORMATION AND IDEAS

i. Geographic Areas

Issuers invite responses that include ideas and recommendations regarding the development of a gigabit fiber network in defined geographic areas where demand for the service is likely to be sufficient, as well as expanded wired and/or wireless broadband service to underserved and disadvantaged residential areas. Comprehensive responses will examine existing resources and evaluate the feasibility of network expansion in these areas, including the necessary steps and additional resources or policy changes required to develop an expansive network.

ii. Desired Network Characteristics

Issuers intend to be an infrastructure and policy partner only and do not intend to act as a retail service provider or network operator. Desired network characteristics are outlined below.

General Requirements for All Technology Solutions

Gigabit Wired or Wireless Broadband

Customers should be able to attach any devices to the network, as long as they do not impair network performance. Customers must also be able to post and access any lawful content on non-discriminatory terms. Data must be encrypted while traversing the broadband network in order to ensure the security and privacy of customers.

The network must be characterized by a transport infrastructure that is physically and logically redundant and provide raw Layer 2 transport in addition to IPv4 and IPv6 Layer 3 routing. The infrastructure must be capable of providing 99.9% availability, be resilient with low latency and jitter, and ensure that packets sent and received at the network edges are identical. Finally, the network must permit the adoption of technologies such as DWDM, LTE, 802.11ac and other technologies as they become standardized or gain a significant market share.

Gigabit Network Requirements

In addition to the general requirements outlined above, Issuers prefer an open network architecture that allows for multiple service providers and equal access to fiber infrastructure at reasonable wholesale cost, providing dedicated bandwidth to all customers and service providers. The network must be sufficient to support the provision of any combination of voice, video, and data services at gigabit speed, in both upstream and downstream directions, to residents and businesses in St. Louis.

iii. Public Assets and Infrastructure

Issuers possess a variety of public assets and infrastructure that may be leveraged to support the development and expansion of a comprehensive telecommunications network. The use of any of these assets may be subject to certain restrictions, regulations, and/or additional authorization by other agencies. Some assets may be preempted from use due to existing contractual relationships, limitations due to tax-exempt bonds or grant funding restrictions concerning private use, and some may be removed from consideration for some other reason. Any such preemption of use of any public asset or assets and infrastructure may be disclosed at any time.

St. Louis City Code of Ordinances

Titles 8 and 23 of the St. Louis City Code of Ordinances govern franchises for communication services. Please reference the requirements of this section along

with Titles 20 and 25 when considering public assets and infrastructure.

1. Rights-of-way

Issuers have thousands miles of roadways and alleys within their service area. In addition, the city has an extensive network of water mains and sewers that can potentially be leveraged to support expansion of broadband infrastructure. Planned street maintenance could be utilized to coordinate any proposed work with preexisting construction schedules and these schedules may provide certain flexibility to align with a potential network rollout.

2. Dark Fiber

Issuers own or have access to a significant network of Dark Fiber within their service area that could potentially be leveraged towards achievement of the goals identified earlier. Additionally, Issuers may also have access to existing conduits in public right of way that could be utilized for easy installation of optical fiber.

3. Light and Utility Poles

Issuers and their partner entities own thousands of light poles across the city. If considered an optimal form of supporting wired or wireless broadband infrastructure, light poles could potentially be leveraged for aerial placement of equipment. Depending on the type of equipment required, certain poles may require concurrent upgrades or replacement at the time of installation. In addition to Issuer-owned light poles, there are thousands of utility poles owned by other entities, such as Ameren. Usage of these poles would require further negotiation with the individual utilities.

4. Municipal Support

In any future procurement that may follow the issuance of this RFI, one of the Issuers will again serve as the point of contact; however, in the event of any future procurement efforts, the Issuers will coordinate efforts with other relevant agencies to ensure a smooth and rapid deployment.

5. Market Potential

In any future procurement that may follow the issuance of this RFI, Issuers anticipate partnering with sister agencies to leverage overall annual IT spending, subject to agreement by those agencies, to accelerate development of gigabit speed broadband.

Issuers are willing to work with respondents to analyze potential demand in proposed service areas and underserved and disadvantaged residential areas by helping to pull together data on existing private broadband spending and demand for gigabit service. Respondents are invited to propose additional areas in the city where network expansion

supports economic growth and presents viable economic opportunity for a potential service provider.

C. SUPPORTERS OF THE PROJECT

Respondents should be aware that Issuers have discussed this RFI with a number of entities in the St. Louis region, who have expressed support for the projects described in this RFI (referred to hereafter in the aggregate as "Supporters.") To the extent useful to the respondent, the response could refer to ways in which partnerships with one or more of the Supporters would improve the ability of the Respondent to meet the goals of this RFI. The Supporters include:

- 1. Institutions of Higher Education
- 2. Non-City Government Agencies
- 3. Startups, Midsize and Large Businesses
- 4. Commercial Real Estate Owners/Developers
- 5. Multiple Dwelling Unit Owners/Developers

D. INFORMATION ABOUT THE RESPONDENT

The response should include general information about the respondent, such as:

- 1. Background information including the following details for each company or organization represented in the response: company name, company address, company web page, description of products and services, professional strengths and abilities.
- 2. Identification of a lead company or organization if more than one is represented in the response.
- Contact information for the company or group's primary contact.
 Respondents may provide more than one contact, but should designate only
 one primary contact. The following details should be included for each
 contact: name, title, company name, address, phone number and email
 address.
- 4. Description of the respondent's experience financing, designing, building, provisioning and/or operating broadband networks or other major infrastructure projects.
- 5. Description of any test results, pilot projects or experiments involving new network technologies or network elements that might be incorporated into respondent's proposed solution(s).
- 6. Sufficient information to demonstrate the respondent's financial ability to engage in a project of the magnitude described in the response.
- 7. Description of any current or past contractual relationships, partnerships, collaborations or other working relationships with ISSUERS or any of its sister agencies.

V. AREAS OF COOPERATION

To the extent not covered in previous responses, this section highlights ways that ISSUERS could cooperate with respondents to improve the business case for proposed solutions.

Specifically, this section could include:

- 1. <u>Resources and facilities</u>: Explanation of need for access to community assets and resources. Respondents should also address the relative importance and impact of variations in terms or more flexibility with respect to accessing the following types of community assets, facilities, and policies:
 - a. Pole Attachments
 - b. Utility conduits
 - c. Dark fiber
 - d. Backhaul or ISP partnerships involving local, statewide or regional fiber assets
 - e. Public Rights of Way
 - f. Undergrounding policies
 - g. Other community assets, facilities (including radio towers) or policies not specifically mentioned above
- 2. Regulatory environment: Description of any rules or regulations at the federal, state or local level that could impact the feasibility or underlying economics associated with the proposed solutions. Responses should also include an explanation of any forms of proposed regulatory relief, including streamlined permitting, which could improve the economic case for the business models or network solutions proposed or for other network solutions that respondents considered but dismissed due to existing regulations and their effect on economic viability of such proposal.
- 3. <u>Contracting issues</u>: Explanation of any material considerations or expectations that respondents have with respect to any of the following issues likely to be negotiated during any future Requests for Proposal:
 - a. Intellectual property
 - b. Insurance
 - c. Indemnities
 - d. Warranties
 - e. Dispute resolution
 - f. Other contracting issues not specifically listed above
- 4. Other partnership or revenue opportunities: Discussion of any other types of partnerships or working relationships between respondents and Supporters which could improve the business case for respondents to partner with one or more Supporters. For example, a company may work with universities and the surrounding communities to develop partnerships that allow the company

to deliver voice, video and data services, and/or to pilot cutting-edge new products, recruit new employees, or enter branding and marketing agreements.

We encourage respondents to be creative and suggest other types of partnerships or business opportunities of interest.

VI. TERMS, CONDITIONS AND DISCLAIMERS FOR RFI

Responses to this RFI become the exclusive property of ISSUERS. All documents submitted in response to this RFI may be regarded as public records and may be subject to disclosure. This RFI is issued solely for information and planning purposes and does not constitute a solicitation. No material submitted in response to this RFI will be returned. Respondents are solely responsible for all expenses associated with responding to this RFI.

1. Confidentiality

All submissions are subject to the Missouri Sunshine Law. To the extent that respondents desire to submit proprietary information to Issuers, Issuers represents that it will use all reasonable efforts to claim available exemptions under the Missouri Sunshine Law (MSL), and will notify the affected respondent if an MSL request is received in connection with that proprietary information. All materials that the respondent believes are proprietary MUST be labeled "Proprietary, privileged and confidential." Issuers cannot guarantee that its efforts to claim available exemptions will be successful and Issuers may be required to disclose the respondent's information, even that which is labeled proprietary, privileged and/or confidential.

2. Incurred Costs

Issuers will not be liable in any way for any costs incurred by respondents in replying to this RFI, including, but not limited to, costs associated with preparing the response or participating in any site visits, demonstrations, conferences or oral presentations.